

UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA

MOLDEX-METRIC, INC.,
Plaintiff,

vs.

3M COMPANY and 3M INNOVATIVE
PROPERTIES COMPANY,
Defendants.

Civil No. 14-1821 (JNE/FLN)

[PUBLIC VERSION]

**MOLDEX'S OPPOSITION TO 3M'S MOTION FOR PARTIAL SUMMARY
JUDGMENT AND/OR FOR JUDGMENT ON THE PLEADINGS
(ECF NO. 195 ET SEQ.)**

This action arises from anticompetitive patent litigation mounted by defendants 3M Company and 3M Innovative Properties Company (collectively, “3M”) to stifle its first significant competition in the market for selective attenuation earplugs, a product purchased almost exclusively by the U.S. military. Having enjoyed a ten-year monopoly, 3M sought to block plaintiff Moldex-Metric, Inc. (“Moldex”) from the market by suing it for patent infringement in Case No. 0:12-cv-00611-JNE-FLN (D. Minn.) (the “Patent Litigation”). That 3M did not have a patent that actually read on Moldex’s competing earplug was no obstacle; 3M sued anyway, asserting an earplug patent that no reasonable litigant could conclude was infringed by Moldex’s competing earplug. Hoping to disguise the sham nature of its litigation, 3M also asserted another patent against certain Moldex earmuffs (of which 3M had been aware for a decade). Although this asserted patent at least read on the accused earmuffs, 3M’s earmuff claim was as much a sham as

its earplug claim because 3M knew or should have known that the patent was invalid because of Moldex's prior invention of the claimed earmuffs. 3M maintained its objectively baseless infringement claims for more than a year, blinking only when determinations on the merits approached. Proffering a false pretext for its sudden change of heart, 3M sent Moldex covenants not to sue and moved to dismiss first its earplug claim and later its earmuff claim to divest this Court of jurisdiction to adjudicate Moldex's counterclaims for non-infringement and invalidity. This Court dismissed 3M's claims with prejudice and Moldex's invalidity counterclaims without prejudice.

3M's Motion ("Motion" or "Br.") now seeks to dispose of Moldex's sham litigation antitrust claim, malicious prosecution claim, and—to the extent based on 3M's anticompetitive and baseless litigation—unfair competition claim in this action on the ground that (according to 3M) its decisions to initiate and maintain two patent infringement claims against Moldex in the Patent Litigation were not objectively baseless or lacking in probable cause as a matter of law. 3M's Motion should be denied in its entirety.

With respect to 3M's assertion of U.S. Patent No. 6,070,693 (the "'693 patent"), 3M's Motion must be denied because no reasonable litigant could read the '693 patent—a patent clearly directed to *double*-ended earplugs—and conclude that its claims are literally infringed by the *single*-ended Moldex BattlePlug earplug as 3M alleged. The "Summary of the Invention" portion of the specification states clearly that the present invention "has two ends...either of which can be inserted into the auditory canal"; "has two ends, both of which can be inserted into the auditory canal and is referred to as a

‘double-ended’ device”; and “contrasts with the well-known hearing protector that typically has one end that can be inserted into the auditory canal.” Standing alone, this portion of the specification describing the heart of the invention would alert any reasonable litigant that a claim asserting the '693 patent against the BattlePlug—which undisputedly has only *one* end that can be inserted into an auditory canal—stood no chance of success on the merits. And, when combined with several other clear indications throughout the specification that the invention is limited to an earplug with two insertable ends, no reasonable litigant could possibly conclude otherwise, particularly in light of ample Federal Circuit authority requiring that the claims of a patent so singularly and purposely directed to double-ended earplugs be construed accordingly. For these reasons, Moldex has filed its own motion for summary judgment that 3M’s assertion of the '693 patent against Moldex’s BattlePlug was objectively baseless and lacking in probable cause as a matter of law. *See* ECF No. 200 *et seq.*

3M’s Motion purports to identify no less than *nine* after-the-fact reasons (that can be distilled to only four distinct arguments) why a litigant might reasonably expect to prevail on 3M’s claim that the single-ended BattlePlug infringed the '693 patent. The common—and fatal—problem with all of 3M’s arguments is that they require the Court to ignore the clear description of the '693 patent’s invention in the Court’s most useful tool in claim construction: the specification. *See, e.g., Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc) (specification “is *always* highly relevant to the claim construction analysis,” is “usually...dispositive,” and “is the single best guide to the meaning of a disputed term”) (emphases added) (citations omitted). Any objectively

reasonable assessment of the merits of a claim must focus on the complete picture; 3M’s “nine” arguments are but isolated pixels. When considered in light of the patent’s specification and Federal Circuit authority—as they must be—none of 3M’s arguments would give any reasonable litigant cause to believe 3M’s claim could succeed on the merits. 3M’s Motion should be denied (and Moldex’s motion for summary judgment should be granted) for this reason.

Importantly, even a single missing claim limitation precludes a finding of literal infringement; the BattlePlug was missing *three*. Although Moldex based its own motion for summary judgment on just the most glaring reason 3M’s '693 patent infringement claim was objectively baseless (*i.e.*, that the BattlePlug has only one insertable end), a reasonable jury could also find the BattlePlug conspicuously lacks two other features required by the '693 patent’s claims when properly construed: a “channel extending from [the plug’s] first and second ends to [its] center” and a “second acoustic filter.” And, even if a reasonable litigant *could* somehow hope to obtain the claim construction trifecta it would need to establish literal infringement, it still could not expect to prevail because those same claim constructions would render the asserted claims invalid because of prior art disclosed in the '693 patent specification. 3M’s motion for summary judgment must be denied for these additional reasons.

Finally, genuine disputes of material fact require denial of 3M’s motion with respect to its assertion of U.S. Patent No. 7,036,157 (the “157 patent”) against Moldex’s M-Series earmuffs in the Patent Litigation. Although infringement was uncontested, a reasonable jury could find that—based on facts available to 3M both at the time it filed

suit and as the Patent Litigation progressed—any reasonable litigant would have known that the '157 patent was invalid because of Moldex's prior invention of the claimed earmuff. 3M was aware of Moldex's earmuff when it entered the market in 2002 and, based on its own experience, 3M knew it necessarily took many years to conceive, reduce to practice, develop tooling for, test, retest, certify, and bring to market such an earmuff. A reasonable jury could find that a litigant in 3M's position knew or should have known of Moldex's prior invention, particularly given the circumstances of 3M's belated abandonment of its claim. In light of these disputed facts, 3M's Motion should be denied with respect to the '157 patent as well.

I. BACKGROUND

A. Selective Attenuation Earplugs

Selective attenuation earplugs attenuate explosive sounds more than spoken sounds. *See, e.g.*, Declaration of Matthew S. Hosen, filed concurrently herewith (“Hosen Decl.”) Ex. 5014 at 1:11-15.¹ They work by filling the opening of the ear canal with a plug-like device that has an open channel running from the outside sound source to the user’s auditory canal, allowing some sound to pass through. *Id.* Ex. 6108 at 2:26-3:4, 3:17-26. By filtering sound with constrictions and expansions in the channel, impulse noises are highly attenuated while lower-volume noises are affected much less. *Id.* at 3:24-4:5. “Dual-mode” selective attenuation earplugs have a feature that can be used to block the sound channel in “maximum attenuation” mode, so as to operate as a traditional,

¹ Patent citations herein take the form [column]:[line].

solid earplug that attenuates sound regardless of amplitude or frequency. *Id.* Ex. 5014 at 1:32-37. Selective attenuation earplugs have been known in the prior art since at least the 1960s. *See, e.g., id.* Ex. 5107 at 3720.

B. The '693 Patent

The '693 patent “relates to hearing protectors, and in particular...to a hearing protector to protect against high, continuous or impulsed, noises.” *Id.* Ex. 5014 at 1:11-13. The hearing protector described in the '693 patent is a dual-mode earplug that can function either in a selective attenuation mode or in a fully-blocked, maximum attenuation mode. *Id.* at 1:13-15, 1:30-36.

The '693 patent identifies French Patent Publication No. 2 676 642 (“FR'642”) as an example of a prior art dual-mode earplug with a single insertable end and a manually controlled plug that makes it possible to choose the attenuation mode. *Id.* at 1:30-41. In one embodiment, depicted below, the user can increase attenuation by moving the plug (35) over the rod (26), which blocks the constricted channel. *Id.* Ex. 6108 at 10:22-27.

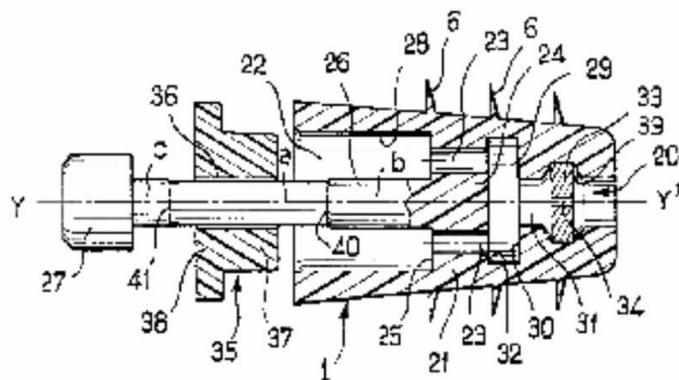


FIG. 4

Id.

According to the '693 patent, the manually controlled plug of the prior art FR'642 is problematic, however, because it “requires careful handling by the user” and the “manipulation can be done incorrectly, resulting in inefficient blockage” in the two attenuation modes. *Id.* Ex. 5014 at 1:37-41. The '693 patent purports to solve this problem, describing its “invention” as a double-ended hearing protector that does not require a user to manipulate a single-ended hearing protector (*e.g.*, by inserting a plug into the non-inserted end) to attain a second attenuation level; rather, because the invention is double-ended, the wearer can obtain a different attenuation level simply by inserting the other end into the ear. *Id.* at 1:44-2:5 (“The device is useful in the fact that it possesses, in the same hearing protector, two configurations that can have different attenuation characteristics, both obtained simply by reversing the direction of the...earplug...that is inserted into the auditory canal.”).

C. Moldex’s BattlePlug Earplug

BattlePlug products are all identical with respect to the structural features relevant to an infringement analysis of the '693 patent. *See, e.g.*, Declaration of James E. Hornstein, filed concurrently herewith (“Hornstein Decl.”) ¶ 5. All BattlePlug products have only one insertable end, and one channel with multiple constrictions in the primary sound path. *Id.* ¶ 7. The non-insertable end includes a cap, similar to the plug of FR'642, that allows the user to open (for selective attenuation) or block (for maximum attenuation) the BattlePlug’s single channel by opening or closing a cap. *Id.* at ¶ 7 & Exs. 1-3. Representative BattlePlugs are depicted below in maximum attenuation mode (left) and selective attenuation mode (right):



Id. Exs. 1 & 2.

BattlePlugs do not have a hole to the exterior at the center of the plug, *id.* ¶ 8, as illustrated in the excerpted and annotated detail of a BattlePlug production drawing below:

[REDACTED IMAGE]

See Hornstein Decl. Ex. 3.

D. The Patent Litigation

The vast majority of selective-attenuation earplugs are purchased by the U.S. military. Hosen Decl. Ex. 5627 at -56010. Until 2011, 3M was the sole significant supplier of these earplugs to the military. *Id.* Ex. 5645 at -83684. In 2011, Moldex introduced the BattlePlug, a selective-attenuation earplug, and obtained approval to sell it to the Army. Hornstein Decl. ¶ 4. Moldex made its first sale of BattlePlugs to the United States military in March 2011, with delivery later that year. *Id.*

3M responded to this challenge to its monopoly by filing the Patent Litigation in March 2012, alleging that (1) Moldex's BattlePlug infringed claims 1, 3, and 17 of 3M's '693 patent; and (2) that its M-Series earmuff infringed 3M's '157 patent.² Hosen Decl. Ex. 5102. After nearly a full year of litigation, and only one week before the hearing on Moldex's fully-briefed motion for summary judgment of non-infringement of the '693 patent, 3M sent Moldex a covenant not to sue and moved for dismissal of its '693 patent infringement claim. *Id.* Exs. 9 & 5122. Two months later, 3M sent Moldex a second covenant not to sue and moved for dismissal of its '157 patent infringement claim. *Id.* Ex. 5124. Both claims were dismissed with prejudice. *Id.* Ex. 12.

E. This Action

On June 5, 2014, Moldex filed this lawsuit, alleging that 3M (1) monopolized or attempted to monopolize certain United States product markets in violation of Section 2 of the Sherman Act through the sham Patent Litigation; (2) engaged in malicious prosecution of the sham Patent Litigation; and (3) engaged in unfair competition in violation of California Business & Professions Code § 17200 *et seq.* by, among other things, initiating the sham Patent Litigation. ECF No. 1. On February 2, 2015, the Court denied 3M's anti-SLAPP motion to dismiss Moldex's malicious prosecution claim. ECF No. 62. After examining the merits, the Court held that Moldex had shown by clear and

² The '157 patent discloses and claims a hood for an earmuff with superior noise-suppression capabilities due to the use of multiple plastic materials in its outer shell to reduce susceptibility to oscillations and vibrations in response to sound waves. Hosen Decl. Ex. 5006 at 1:54-2:16.

convincing evidence that 3M's conduct in filing and prosecuting the Patent Litigation was both objectively and subjectively baseless. ECF No. 62 at 20-22.

II. LEGAL STANDARD

To prevail on its motion for summary judgment or judgment on the pleadings, 3M must establish as a matter of law that its assertion of the '693 and '157 patents was not objectively baseless or lacking in probable cause. A claim is objectively baseless if "no reasonable litigant could realistically expect success on the merits." *Prof'l Real Estate Investors, Inc. v. Columbia Pictures Indus.*, 508 U.S. 49, 60 (1993) ("PREI").³ "Probable cause" requires "a reasonable belief that the claim will ultimately prevail, or 'such facts and circumstances as will warrant a cautious, reasonable and prudent person in the honest belief that his action and the means taken in prosecution of it are just, legal, and proper.'" *Porous Media Corp. v. Pall Corp.*, 186 F.3d 1077, 1079 (8th Cir. 1999) (applying Minnesota law); *accord Fleishman v. Superior Court*, 102 Cal. App. 4th 350, 354 (2002) (similar). Whether a claim or suit is objectively baseless or lacks probable cause is essentially the same inquiry, *see PREI*, 508 U.S. at 62-63; *accord Porous Media*, 186 F.3d at 1080 n.4, and is a question of law where the factual circumstances are not in dispute. *See PREI*, 508 U.S. at 63.

³ Whether a patent infringement claim is objectively baseless is governed by Federal Circuit law. *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1067-68 (Fed. Cir. 1998). The Court does not need to determine whether California or Minnesota law applies to Moldex's malicious prosecution claim for purposes of this motion because the relevant law of the two states is not in conflict. *See, e.g., Whitney v. Guys, Inc.*, 700 F.3d 1118, 1123 (8th Cir. 2012).

III. ARGUMENT

A. The Specification of the '693 Patent Clearly Establishes That It Is Directed to Double-Ended Earplugs and No Reasonable Litigant Could Conclude Its Claims Are Infringed by the Single-Ended BattlePlug

The simplest reason 3M's Motion must be denied with respect to the '693 patent is the reason 3M's Motion largely fails to address: No reasonable litigant could read the '693 patent and conclude it applies to the single-ended BattlePlug because the specification makes clear that its claims cover only double-ended earplugs. The '693 patent is not complex and spans less than 5 columns in total. In that short space, the specification states in the summary of the invention that the present invention "has two ends...either of which can be inserted into the auditory canal"; "has two ends, both of which can be inserted into the auditory canal and is referred to as a 'double-ended' device"; and "contrasts with the well-known hearing protector that typically has one end that can be inserted into the auditory canal." Hosen Decl. Ex. 5014 at 1:57-2:5. The specification criticizes prior art earplugs with a single insertable end. *Id.* at 1:30-41, 1:57-2:5. And it includes eight drawings of embodiments, *all* of which are double-ended earplugs. *Id.* Under clear and prolific Federal Circuit law, any reasonable litigant would understand that the '693 patent claims are limited to earplugs with two insertable ends. Nevertheless, 3M sued Moldex alleging that the single-ended BattlePlug literally infringed the '693 patent.

The '693 patent has only one independent claim, claim 1, from which all other claims depend; thus, to infringe any claim of the '693 patent literally, the BattlePlug must meet all of the limitations of claim 1. *See Alcon Research, Ltd. v. Apotex Inc.*, 687 F.3d 1362, 1367 (Fed. Cir. 2012); *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 980 (Fed. Cir. 1999).

Claim 1 requires, among other things, a hearing device that has “a cylindrical body **having** a center, **a first end and a second end.**” Hosen Decl. Ex. 5014 at 4:30-35 (emphases added). Thus, Moldex’s single-ended BattlePlug can only infringe if “a first end and a second end” can be construed broadly enough to read on a single-ended earplug. *See, e.g., Abtox, Inc. v. Exitron Corp.*, 122 F.3d 1019, 1023, *opinion amended on reh’g*, 131 F.3d 1009 (Fed. Cir. 1997) (“The test for patent infringement requires both proper interpretation of the claim scope and proper comparison of the claims with the accused device.”).

Although 3M contends that the plain and ordinary meaning of “first end and a second end” does not require that each recited end be insertable into the auditory canal (such that claim 1 can extend to cover earplugs with only one insertable end), the '693 patent specification unambiguously states that its claimed invention as a whole is a *double-ended* earplug, wherein *both* ends are insertable, and expressly contrasts its invention against “well-known” single-ended prior art earplugs:

SUMMARY OF THE INVENTION

...

The hearing protector has two ends, both of which can be inserted into the auditory canal and is referred to as a “double-ended” device. This contrasts with the well-known hearing protector that typically has one end that can be inserted into the auditory canal, while the other end allows the hearing protector to be gripped so the user can position it in the auditory canal. The present invention has two ends, that may or may not be identical, either of which can be inserted into the auditory canal, thus making it possible to choose between two operating modes of attenuation that may or may not be identical.

The device is useful in the fact that it possesses, in the same hearing protector, two configurations that can have different attenuation characteristics, both obtained by simply reversing the direction of the hearing protector, or ear plug, that is inserted into the auditory canal.

Id. at 1:44-2:5 (emphases added).

Additionally, all eight figures that the patent examiner identified as the species of inventions claimed by the '693 patent's parent depict double-ended earplugs, never a single-ended earplug:

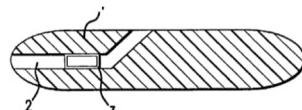


FIG.1

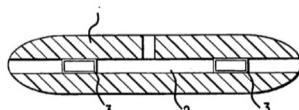


FIG.2

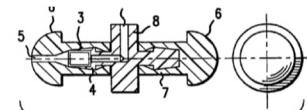


FIG.3

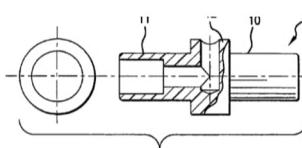


FIG.4a

14 11 12 10

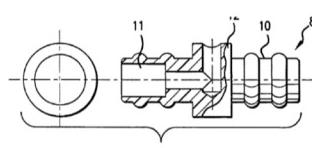


FIG.4b

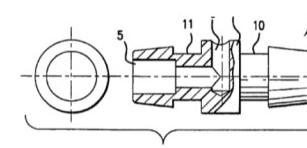


FIG.4c

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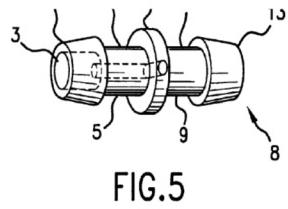


FIG.5

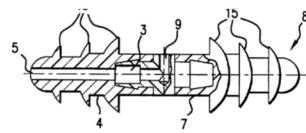


FIG.6

See generally Hosen Decl. Ex. 5014; *id.* Ex. 6100 at 39-40. Nothing in the specification suggests that any of the claims are intended to read on single-ended earplugs.

“[C]laims ‘must be read in view of the specification, of which they are a part.’”

Phillips, 415 F.3d at 1315. “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (internal citations omitted). Under well-established principles of claim construction, the '693 patent specification's explicit description of “the present invention” as a double-ended earplug, the clear distinction of the claimed invention from single-ended earplugs, and exclusive and uniform disclosure of double-ended earplugs necessarily limits the scope of the claims of the '693 patent to double-ended earplugs.

The Federal Circuit has repeatedly held that statements describing “the present invention” as a whole limits the scope of the claims. *See, e.g., Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007) (“When a patent...describes the features of the ‘present invention’ as a whole, this description limits the scope of the invention.”); *Watts v. XL Sys., Inc.*, 232 F.3d 877, 883 (Fed. Cir. 2000) (statement in specification that “[t]he present invention utilizes [the varying taper angle] feature” limited claims to structures utilizing taper angles).⁴

⁴ *See also Am. Calcar, Inc. v. Am. Honda Motor Co.*, 651 F.3d 1318, 1337 (Fed. Cir. 2011) (relying in part on statement in “Summary of the Invention” to define claim

Similarly, the Federal Circuit has repeatedly held that the specification can limit the claims where it consistently and exclusively discloses only one embodiment or distinguishes the invention from prior art on the basis of certain features. *See, e.g.*, *Hologic, Inc. v. SenoRx, Inc.*, 639 F.3d 1329, 1338 (Fed. Cir. 2011) (limiting construction of term where “the specification, including the figures, consistently and exclusively” disclose only one embodiment, and “that [embodiment] is clearly what the inventors...conceived of”); *O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1581-82 (Fed. Cir. 1997) (“smooth-walled, completely cylindrical” structure not encompassed in scope of claim term “passage” where “[a]ll of the ‘passage’ structures contemplated by the written description” were “either non-smooth or conical” and “the description expressly distinguishe[d] over prior art passages by stating that those passages are generally smooth-walled”).

These principles are well-illustrated in *Honeywell International, Inc. v. ITT Industries, Inc.*, 452 F.3d 1312 (Fed. Cir. 2006), in which the Federal Circuit rejected the very arguments 3M now contends support the broad claim construction 3M needed if it were to have any chance of prevailing. In *Honeywell*, the Federal Circuit affirmed the district court’s construction of the asserted patent claim’s “fuel injection system component” limitation to mean “a fuel filter.” *Id.* at 1318. The district court acknowledged that the plain and ordinary meaning of “fuel injection system component” was broader in scope than “a fuel filter,” and could include “any constituent part of the

term) (same); *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1348 (Fed. Cir. 2004) (same).

fuel injection system...including, for example, fuel filters, fuel lines, and connectors,’’ such as the accused “quick connects” that join other fuel injection system components together. *Id.* at 1315-16.

Despite a broader plain and ordinary meaning, the Federal Circuit affirmed the district court’s construction of “fuel injection system component” as limited in scope to fuel filters, rejecting the patentee’s argument that this construction “import[s] a limitation from the specification into the claims” and “improperly limit[s] the scope of the claims to the specification’s preferred embodiment.” *Id.* at 1317-18. After reciting the teachings of *Phillips* regarding the primacy of the specification in claim construction, the Federal Circuit stated that the specification’s written description “uses language that leads us to the conclusion that a fuel filter is the only ‘fuel injection system component’ that the claims cover[.]” *Id.* at 1318.

The Federal Circuit noted that the written description referred to the fuel filter as “this invention” or the “present invention” at least four times. *Id.* As but one example, the specification stated that “[t]his invention relates to a fuel filter for use in the fuel line that delivers fuel to a motor vehicle engine.” *Id.* The Federal Circuit sensibly reasoned that “[t]he public is entitled to take the patentee at his word and the word was that the invention is a fuel filter.” *Id.*

The Federal Circuit also noted that the written description did not indicate that a fuel filter was merely a preferred embodiment of the claimed invention. *Id.* Rather, it was the *only* component disclosed in the written description that could be the invention of the asserted claims. *Id.* The Federal Circuit found still further support for limiting the

scope of the claims to fuel filters in the written description's detailed discussion of the prior art problem the claimed invention addressed, *i.e.*, leakage of certain fuel filters. Thus, “[g]iven the written description's disclosure,” the Federal Circuit concluded that the patentee had limited the scope of the claims to fuel filters. *Id.*⁵

All of the features relied on by the Federal Circuit in *Honeywell* are present in the specification of the '693 patent. The specification here states plainly that the “present invention has two ends...either of which can be inserted into the auditory canal.” Hosen Decl. Ex. 5014 at 1:63-65. It criticizes and distinguishes prior art single-ended earplugs and describes the benefit of the claimed invention as allowing users to select the attenuation mode they want to use “by simply reversing the direction of the hearing protector, or ear plug, that is inserted into the auditory canal.” *Id.* at 1:30-41, 2:1-5. Every embodiment and figure in the '693 is consistent with a double-ended earplug. It is hard to imagine a specification that more clearly limits the scope of the claims.

Under *Honeywell*—decided years before 3M filed suit against Moldex—and the numerous other Federal Circuit decisions cited above, the specification's clear and repeated disclosure of the '693 patent's invention as a double-ended earplug limits the scope of the claims to earplugs with two insertable ends. It is beyond dispute that Moldex's BattlePlug does not have two insertable ends. *Id.* Ex. 1 at 218:5-219:4. Rather, one end of the BattlePlug is a “plug handle” that cannot enter the auditory canal. Hornstein Decl. ¶ 7 & Exs. 1-3. No litigant—and certainly not one that undertook even a

⁵ See also *Nystrom v. TREX Co.*, 424 F.3d 1136, 1143-45 (Fed. Cir. 2005) (limiting scope of claim term based on consistent description in specification).

modicum of legal research regarding controlling claim construction standards—could read the '693 patent and reasonably conclude that 3M could prevail on its infringement claim. 3M's Motion must be denied, and Moldex's motion should be granted.

B. None of 3M's Nine Arguments Regarding "End" Justifies 3M's Assertion of the '693 Patent—Directed to Double-Ended Earplugs—Against the Single-Ended BattlePlug

Notwithstanding the law and undisputed facts recounted in Section III.A, *supra*, 3M purports to identify nine reasons why, as a matter of law, a reasonable and cautious litigant could conclude that the '693 patent reads on a single-ended earplug based on its interpretation of “a first end and a second end.” None has merit.

1. The Claims' Plain Language Does Not Make 3M's Infringement Claim Objectively Reasonable

3M first contends that its assertion of the '693 patent against Moldex's BattlePlug was not objectively baseless because the asserted claims' plain language—requiring “a first end and a second end”—does not expressly require a plug with two insertable ends. There are two problems with 3M's argument.

First, the only way to conclude that the claims could read on a single-ended earplug like the BattlePlug is to read the claim language in a vacuum, without reference to the specification which, as demonstrated above, makes clear that the '693 patent is directed only to double-ended earplugs. As the precedent cited by 3M makes clear, even seemingly simple claim terms must *always* be interpreted in the context of the specification.

For example, *Phillips* teaches that “[t]he claims, of course, do not stand alone. Rather, they are part of a fully integrated written instrument, consisting principally of a specification that concludes with the claims. For that reason, claims must be read in view of the specification, of which they are a part.” 415 F.3d at 1315 (internal citations and quotations omitted). “[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Id.* (internal citations and quotations omitted). Moreover, *Phillips* expressly cautions against exactly what 3M does here on its Motion: “[A]ssigning [] a limited role to the specification, and in particular requiring that any definition of claim language in the specification be express, is inconsistent with [Federal Circuit law] that the specification is the single best guide to the meaning of a disputed term, and that the specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.” *Id.* at 1320-21 (internal citations and quotations omitted).⁶

Second, even if a court were to focus (improperly) on *only* the claim language to the exclusion of the clear specification, the claim language does not support 3M’s argument because other language in the claims themselves confirms that “end” cannot include a non-insertable end. Claim 1, the only independent claim of the '693 patent, also

⁶ Similarly, in *Straight Path IP Group, Inc. v. Sipnet EU S.R.O.*, 806 F.3d 1356, 1360 (Fed. Cir. 2015), cited by 3M, the Federal Circuit noted that “the specification plays a more limited role than in the common situation where claim terms are uncertain in meaning” only *after* studying the specification and concluding that there was nothing in it “expressly or implicitly redefin[ing]” the claim term and finding ample evidence throughout the specification and prosecution history supporting its plain reading. *Id.* at 1361.

requires that the channel extending from each end of the cylindrical body of the earplug to the center “contain[] a first acoustic filter and a second acoustic filter, *each of which said first and second filters being in communication with one of said first and second ends.*” Hosen Decl. Ex. 5014 at 4:30-42 (emphases added). This limitation would only make sense in a double-ended plug; a sound path has only one filtering effect, *see* Declaration of Sigfrid D. Soli, filed concurrently herewith (“Soli Decl.”) ¶ 57-58, and thus a claim requiring a filter in communication with either end indicates to a person of ordinary skill in the art that the earplug is double-ended.

2. 3M’s Argument That the Specification Does Not “Disclaim” Single-Ended Earplugs Provides No Support for 3M’s Infringement Claim

3M next argues that the '693 specification does not “disclaim” earplugs with a single insertable end, but instead “merely describes the preferred embodiment of dependent claim 4” which requires a ferrule at each end. Br. at 17-20. As an initial matter, this argument fails because the summary of the invention’s description of the invention as a “‘double-ended device’” is also used in describing Figure 2 (“a ‘double-ended’ hearing protector”), *see* Hosen Decl. Ex. 5014 at 2:52-54; there is no basis to conclude that “double-ended” refers only to the ferruled embodiment.

This argument fails because it is based on the erroneous premise that the Court must find a clear and unambiguous explicit disclaimer of single-ended earplugs in order to construe “a first end and a second end” to require a double-ended earplug. No disclaimer analysis is required; courts routinely use (and are required under *Phillips* to use) the specification to determine the scope of the claims. *See Honeywell*, 452 F.3d

1312 at 1318-19 (limiting claim scope due to “clear statements in the specification describing the invention more narrowly”); *Curtiss-Wright Flow Control Corp. v. Z & J Techs. GmbH*, 563 F. Supp. 2d 1109, 1120 (C.D. Cal. 2007) (post-*Phillips*, “it is not necessary to find clear disavowal of claim scope in order to define the claims’ words narrowly”). As demonstrated in Section III.A, *supra*, the '693 patent’s specification clearly limits the scope of the claims, and 3M’s “disclaimer” argument must be rejected.⁷

3. 3M’s Speculative Prosecution History and Claim Differentiation Arguments Provide No Basis for a Reasonable Litigant to Disregard the Plain Import of the '693 Patent’s Specification

3M next contends that a reasonable litigant could infer from a silent prosecution history that the examiner and the applicant purportedly understood claim 1 of the '693 patent to read on a single-ended earplug and its claims should therefore be construed accordingly. The inference 3M seeks to draw, however, is entirely speculative and based solely on surmise regarding what was in the examiner’s and inventor’s minds. In any event, inferences regarding what an examiner *may* have thought or what a patentee *may* have thought or intended—but neither stated—simply cannot outweigh a clear specification.

⁷ Even if an express disclaimer *were* required to limit the scope of the '693 patent claims to dual-ended earplugs, that standard is met here. Courts have found disclaimer where the specification expressly and unambiguously describes the invention as not including a particular feature, “even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question.” *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341-45 (Fed. Cir. 2001) (finding disclaimer of configuration where specification distinguished prior art on that basis and described “the present invention” as having different configuration).

a. The Silent Prosecution History Is Ambiguous at Best

The '693 patent is a divisional application of U.S. Patent No. 5,936,208 ("the '208 patent") and the two patents share the same specification. *See, e.g.*, Soli Decl. ¶ 34. In the first office action in the prosecution of the '208 patent, the examiner required the patentee to elect among "8 patentably distinct species of the claimed invention," *i.e.*, among the double-ended earplug configurations corresponding to each of the eight figures in the specification. Hosen Decl. Ex. 6100 at 39. The patentee selected the configuration corresponding to Figure 6 (at right) and prosecuted claims 1-16 directed to this configuration, canceling the remaining claims 17-33 for later prosecution. *Id.* at 45-46, 49.

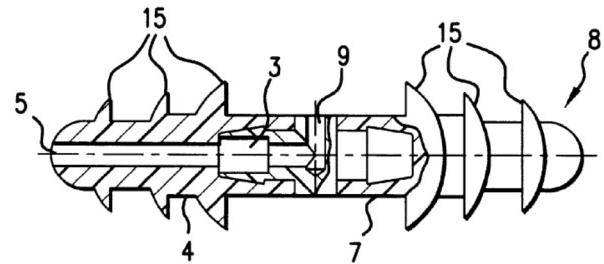
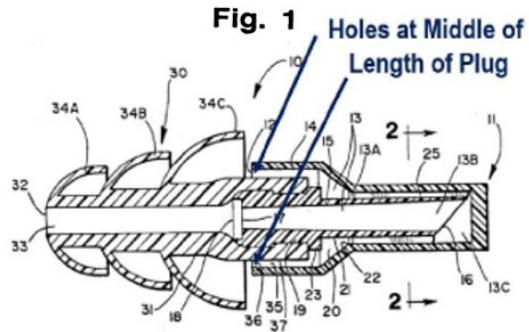


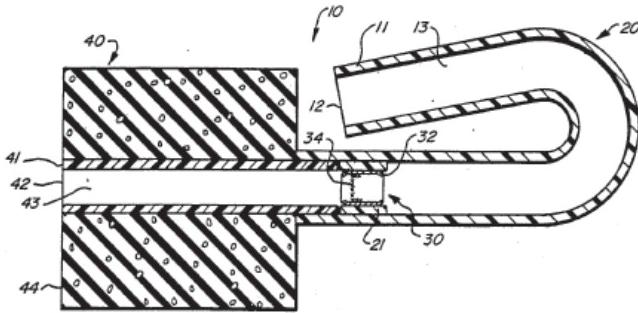
FIG.6

After the applicant made his election in the prosecution of the '208 patent, the examiner issued a single substantive office action rejecting then-presented claims 1, 15, and 16 of the '208 patent as "clearly anticipated" by U.S. Patent No. 5,113,967 (the "'967 patent") to Killion *et al.* and claim 1 as "clearly anticipated" by U.S. Patent No. 4,852,683 (the "'683 patent") to Killion. *Id.* at 49-50. The examiner did not explain why or how claims 1, 15, and 16 were "clearly anticipated" by the Killion prior art. *Id.* at 49-50.

The Killion '967 patent is directed to an earplug with a channel that opens to holes at the center of the length of the earplug as shown in its Figure 1:



Hosen Decl. Ex. 13 (annotations added). The prior art Killion '683 patent is directed to an earplug with an external sound tube 11 which has an external opening 12 and an internal sound channel 13, as shown in its Figure 1:



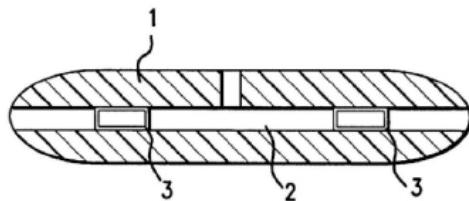
Id. at Ex. 14.

The applicant amended the claims to incorporate the dual-ended ferrule limitation of then-claim 2 into independent claim 1. Hosen Decl. Ex. 6100 at 52-53 (adding to claim 1 “and a ferrule at each of said first and said second ends, wherein said ferrules are separate and said cylindrical body forms an internal connector linking said ferrules”). The applicant did not explain why adding the ferrule limitation overcame the Killion prior art; instead, he simply remarked:

[I]n order to expedite prosecution, the allowable subject matter of claim 2 has been incorporated into independent claim 1, thereby rendering the rejection moot and placing claim 1 in condition for allowance.

Id. The examiner allowed the claims as amended. *Id.* at 56.

The applicant filed the '693 patent application on the same day he filed the amendment in response to the restriction requirement in the '208 patent prosecution. *Id.* Ex. 6103. The '693 patent application included the previously presented claims 17-33 of the '208 patent application, corresponding to the double-ended configuration in the common specification's Figure 2:



Id. Ex. 5014. The claims of the '693 patent were allowed in the first office action by the patent office. *Id.* Ex. 6103 at 35.

According to 3M, this paltry file history somehow reveals that the examiner “did not consider ‘a first end and a second end’ to be limited to the ‘dual-ended’ embodiment disclosed in the specification and that he considered the addition of ‘ferrules’ to signal insertability.” Br. at 14. Thus, 3M argues, independent claim 1 of the '693 patent—because it does not require ferrules—does not require two insertable ends. But this conclusion depends on a series of unsupported inferential leaps combined with faulty reasoning:

First, 3M simply assumes that the examiner understood the Killion prior art to claim only single-ended earplugs and, therefore, his rejection of original claim 1 of the '208 patent—which requires a “first end and a second end”—as anticipated by the Killion prior art means that the examiner understood that a single-ended earplug has a “first end and a second end.” But the prosecution history is completely silent as to why the examiner rejected claims 1, 15, and 16 of the '208 patent over the Killion prior art in the first place; nowhere does the examiner state that either Killion reference was limited to single-ended plugs. *Id.* Ex. 6100 at 49-50. Indeed, the examiner could have reviewed the figures of the Killion prior art and concluded these references disclosed double-ended earplugs. There is simply no way of knowing because the prosecution history is silent regarding the examiner’s reasoning.⁸

Second, 3M makes another unfounded assumption when it concludes that—simply because the examiner allowed rejected claim 1 after the applicant amended the claim to add reference to the ferrules—the examiner “considered the addition of ‘ferrules’ to signal insertability.” Br. at 14. Here too, the prosecution history is completely silent as to why the examiner allowed the claims as amended.

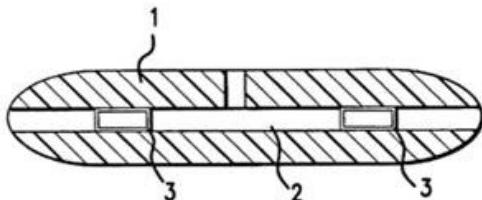
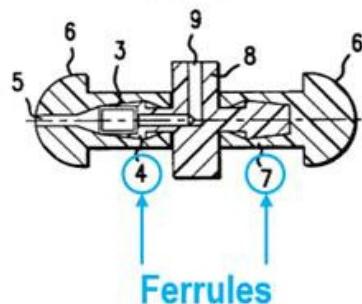
A ferrule is a “ring or cap[,] usually of metal[,] put around a slender shaft (as a cane or a tool handle) to strengthen it or prevent splitting” or a “usually metal sleeve used

⁸ To be certain, Moldex does not suggest that the speculative inferences it offers here are any more valid or reliable than the inferences offered by 3M. Moldex’s point is simply that there are competing inferences that can be drawn from the scant record in the prosecution history, making 3M’s mindreading experiment all the more unreliable. Even if they were reliable, however, the non-movant must be afforded the benefit of all reasonable inferences on summary judgment. See, e.g., *Reimer v. City of Crookston*, 326 F.3d 957, 961 (8th Cir. 2003).

especially for joining or binding one part to another (as pipe sections or the bristles and handle of a brush).⁹ The examiner could have found that the addition of the ferrules themselves made the claimed inventions novel over the Killion prior art. Or, the amendment to add ferrules could have called the examiner’s attention to the double-ended nature of the claimed plug. Certainly, nothing in the file history suggests that the examiner believed that the claims were limited to double-ended plugs ***only*** when the applicant included ferrules, as 3M posits.

Indeed, with respect to the '693 patent, the opposite is true: It is clear that these claims are directed to the species of inventions corresponding with Figure 2 in the '208 and '693 patents’ common specification because claim 1—the sole independent claim of the '693 patent—requires “a first acoustic filter and a second acoustic filter.” Hosen Decl. Ex. 5014 at 4:38-39. The ***only*** hearing protector configuration identified as a claimed species of invention in the examiner’s restriction requirement that has two acoustic filters is Figure 2 (below left), which has two filters 3. Yet, although Figure 2 has two insertable ends and is expressly described by the specification as ““double-ended,” it ***does not*** have ferrules (compared with, for example, Figure 3 (below right) which does have ferrules):

⁹ Merriam-Webster Dictionary, “Ferrule,” available at <http://www.merriam-webster.com/dictionary/ferrule>, last accessed Apr. 18, 2016.

FIG.2**No Ferrules****FIG.3**

Id. (annotations added); *id.* at 2:52-54, 3:17-23 (describing Figure 2 as embodiment of “double-ended” hearing protector but identifying no ferrules). Thus, although a ferrule indicates an end is insertable, the examiner could not have believed that ferrules are **required** in order for an end to be insertable.

Third, 3M assumes that the examiner necessarily interpreted “a first end and a second” in the same way between the original claim 1 of the '208 patent and claim 1 of the '693 patent. This assumption too is unwarranted because claim 1 of the '693 patent includes additional language—never included in claim 1 of the '208 patent—that signal that claim 1 requires two insertable ends: Specifically, claim 1 of the '693 patent requires a “channel containing a first acoustic filter and **a second acoustic filter, each of said first and second acoustical filters being in communication with one of said first and second ends.**” *Id.* Ex. 5014 at 3:38-41 (emphases added). Just as the “ferrules and connector” amendment may have further supported the examiner’s conclusion that amended claim 1 of the '208 patent was limited to an earplug with two insertable ends, the emphasized language above could have confirmed for the examiner that claim 1 of the '693 patent

also claimed a dual-ended earplug. There is simply no way to know. But 3M’s assertion that the examiner was considering the “same claim language,” Br. at 13, is not true because the claim language appeared in different contexts in the two claims.

Finally, Moldex notes that to the extent 3M attempts to support its speculative, inferential argument with its expert’s opinions, this evidence is inadmissible and should be disregarded. *See, e.g., Am. Med. Sys., Inc. v. Laser Peripherals, LLC*, 712 F. Supp. 2d 885, 904 (D. Minn. 2010) (opinions inadmissible because expert “cannot know what the examiner believed or would have done”).

b. No Reasonable and Cautious Litigant Could Realistically Expect to Prevail Based on 3M’s Speculative Inferences Given the Clear Specification

In any event, no litigant could reasonably expect to prevail on the basis of a claim construction argument premised on conjecture about a silent prosecution history given the clear statements in the specification. Because the prosecution of a patent “represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Phillips*, 415 F.3d at 1317; *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (ambiguity of prosecution history made it “unhelpful as an interpretive resource” for claim construction); *see also Inverness Med. Switz. GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1380-82 (Fed. Cir. 2002) (similar). Further, when the prosecution history is inconsistent with the specification, “a broad and vague statement [during prosecution] cannot contradict the clear statements in

the specification describing the invention more narrowly.” *See Honeywell*, 452 F.3d at 1318.

In *Honeywell*, the Federal Circuit reasoned that the examiner’s actions during prosecution were “ambiguous and possibly inconsistent with the written description” because “the examiner did not construe the claim term...in light of the written description,” and thus the Federal Circuit “[did] not assign much weight” to the prosecution history. *Honeywell*, 452 F.3d at 1318-19; *see also Rhodia Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005) (“The purpose of consulting the prosecution history in construing a claim is to exclude any interpretation that was disclaimed during prosecution.” (internal quotations omitted)).

c. For the Same Reasons, 3M’s Claim Differentiation Argument Provides No Reasonable Basis for Its Infringement Claim

3M’s claim differentiation argument is little more than a restatement of its speculative and flawed prosecution history argument and fails for the same reasons. Br. at 10-11. However, 3M’s reasoning that claim 1 cannot require a double-ended plug because it would be no broader than its dependent claim 4 is clearly erroneous for yet another reason: Reading claim 1 to require a double-ended earplug (as it must be read), claim 1 is still necessarily broader than its dependent claim 4. Claim 1 covers double-ended earplugs that may or may not have ferrules, while claim 4 covers only those double-ended plugs that have ferrules. *Compare* Hosen Decl. Ex. 5014 at 4:30-41 with *id.* at 4:46-49. As with 3M’s other arguments, no reasonable litigant could expect to prevail on this claim construction argument.

4. Expert Testimony Does Not Save 3M's '693 Patent Infringement Claim from Objective Baselessness

For the last of its nine arguments, 3M contends that its assertion of the '693 patent against Moldex's BattlePlugs cannot be objectively baseless because its infringement contentions are supported by "a qualified expert." Br. at 21. Of course, 3M is not shielded from liability simply because it found a paid expert to agree with its tortured infringement arguments. Courts routinely find that claims are objectively baseless even though they were supported by expert testimony. *See, e.g., Intex Recreation Corp. v. Team Worldwide Corp.*, 77 F. Supp. 3d 212, 217 (D.D.C. 2015) (awarding attorneys' fees pursuant to 35 U.S.C. § 285 despite expert testimony that litigation positions were not meritless); *Magnetar Techs. Corp. v. Six Flags Theme Parks Inc.*, No. 07-127-LPS-MPT, 2015 WL 4455606, at *10-11 (D. Del. July 21, 2015), report and recommendation adopted, No. CV 07-127-LPS, 2015 WL 5768385 (D. Del. Sept. 30, 2015) (same).

Moreover, expert testimony is extrinsic evidence that is given little consideration by courts when interpreting a claim. *See Phillips*, 415 F.3d at 1317-18 (expert testimony is "less significant than the intrinsic record" and courts "should discount any expert testimony that is clearly at odds with the claim construction mandated by the [intrinsic record].") (internal quotations omitted). Thus, as with all of 3M's arguments, expert testimony provides no basis for a reasonable litigant to ignore the '693 patent specification's clear disclosure of a double-ended earplug.

This is particularly true here, where so many of the expert opinions 3M relies on to prop up its baseless infringement arguments are improper and inadmissible. For

example, [REDACTED]

[REDACTED]

[REDACTED] See, e.g., Hosen Decl. Ex. 6105 at ¶¶ 21, 83-102, 106-112, 145, 155-156, 162-169; see also *supra* 21-28. [REDACTED]

[REDACTED]. *Id.* Ex. 1 at 40:21-42:4; 46:7-48:23. Courts routinely find such opinion testimony inadmissible precisely because it is speculative and unreliable and no reasonable litigant could expect to prevail by relying on it. See, e.g., *Barrett v. Rhodia, Inc.*, 606 F.3d 975, 981 (8th Cir. 2010) (“Expert testimony is inadmissible where...it is excessively speculative or unsupported by sufficient facts.”); see also *Am. Med. Sys.*, 712 F. Supp. 2d at 904..

C. 3M’s '693 Patent Infringement Claim Was Also Objectively Baseless Because Moldex’s BattlePlug Conspicuously Lacks Two Other Required Features

That Moldex’s BattlePlug cannot infringe the '693 patent because it has only one insertable end is only one reason a reasonable litigant could not expect to prevail. 3M’s Motion must also be denied because the BattlePlug does not meet two other limitations of Claim 1, the sole independent claim.

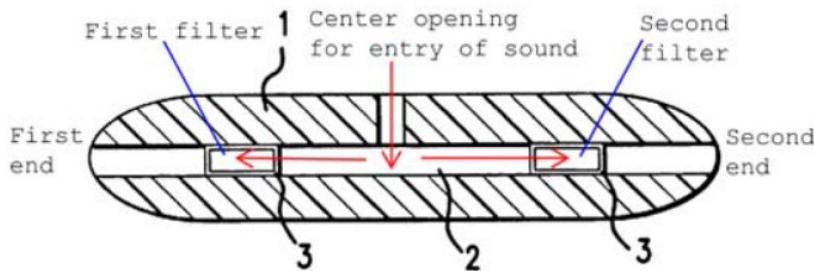
1. 3M’s Assertion of the '693 Patent Against Moldex’s BattlePlug Was Objectively Baseless Because the BattlePlug Does Not Have a Channel with a Center Opening

Claim 1 of the '693 patent requires an earplug with “a channel extending from [the] first and second ends to [the] center of [the protector’s] cylindrical body.” Hosen Decl. Ex. 5014 at 4:36-37. The specification’s description of Figure 2—which, as noted above,

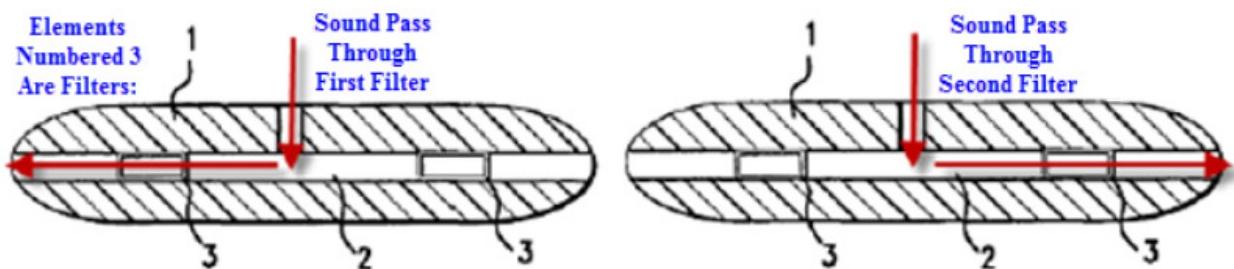
is the only figure that corresponds with the claims of the '693 patent, *see supra* at 24,26-27—explains that the claimed channel requires an opening to the outside of the earplug at the center, between the two filters of the earplug:

Fig. 2 is a longitudinal section view of the hearing protector....*The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1.* The channel 2 also contains an acoustic filter 3 at each end. The filters may or may not be identical.

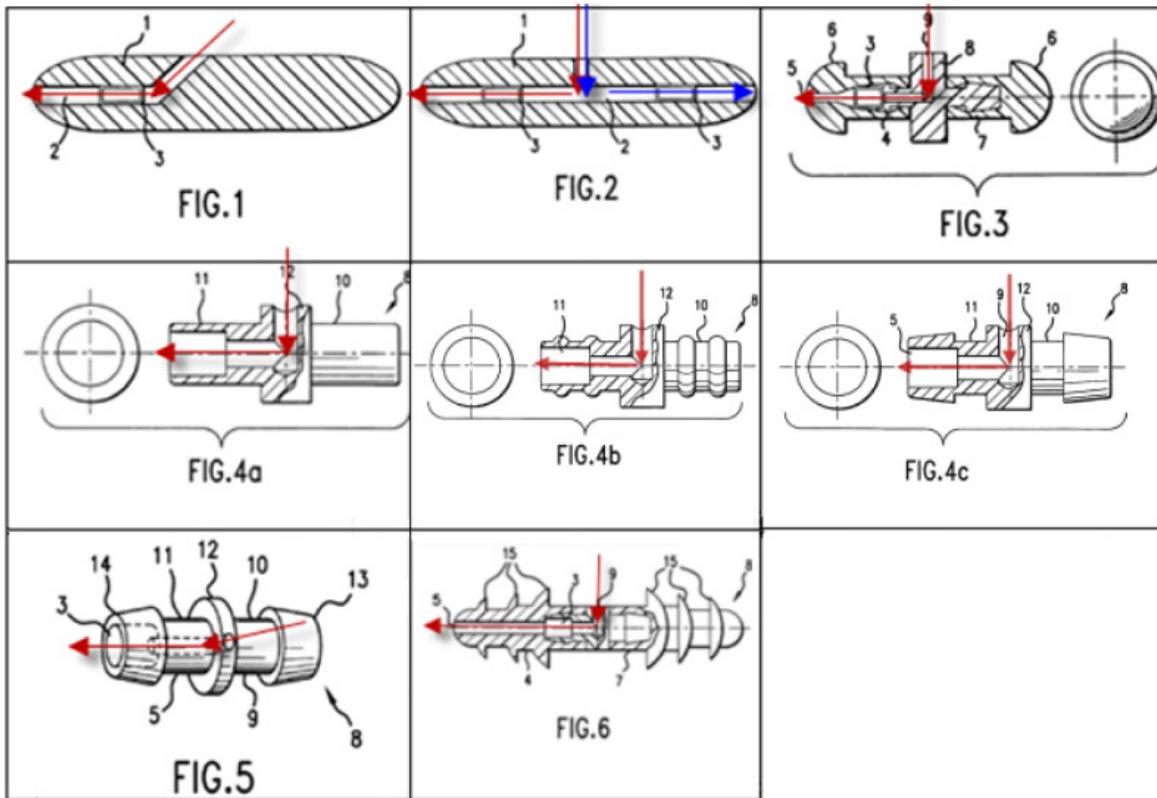
Hosen Decl. Ex. 5014 at 3:17-23 (emphases added). Because the channel “terminates at...the center of body 1,” there must be an opening at the center to the outside; a simple channel with openings only at the ends does not “terminate” at the center. This opening at the center is clearly depicted in Figure 2, as annotated below:



Ex. 5014 (annotations added). That center opening plays a key role in allowing the '693 patent to achieve reversibility:



Id. (color annotations added); Soli Decl. ¶ 52. This reversibility gives the invention its usefulness by allowing for two configurations with different attenuation characteristics, obtained by simply switching the end that is inserted into the auditory canal. Hosen Decl. Ex. 5014 at 2:1-5. And every single one of the specification's eight species of the claimed invention identified by the examiner shows a channel opening at the center:



Id. (annotations added); Soli Decl. ¶ 53.

For all of these reasons, the '693 patent's claimed "channel" must include an opening to the outside at the center of the earplug. The BattlePlug clearly has no such opening. *See supra* at 7-8.

3M attempts to argue that a reasonable litigant could nevertheless conclude that no channel opening at the center is required by rehashing several of the same incorrect

arguments it advanced regarding the double-ended plug requirement. For example, 3M again urges the Court to read the claims in a vacuum and without regard to the specification, *see Br.* at 26, notwithstanding the clear teaching of *Phillips* that the specification “is the single best guide to the meaning of a disputed term.” *Id.*, 415 F.3d at 1320-21.

3M also invokes its argument based on the examiner’s rejection of original claim 1 of the '208 patent as anticipated by the '683 patent to Killion. According to 3M, because the prior art '683 patent to Killion has no center hole, the examiner must have understood claim 1 of the '208 patent, and thus claim 1 of the '693 patent, to require no central hole, or he would not have found original claim 1 of the '208 patent to be anticipated by Killion. *See Br.* at 26-27. Like 3M’s other prosecution history arguments, this argument depends on unreliable speculation based on incompetent and inadmissible expert testimony. *See Section III.B.3, supra.*

Moreover, the invention described in the '683 patent *does* have a channel opening to the outside at the center of the earplug. [REDACTED]

[REDACTED]

[REDACTED]

¹⁰ In Figure 1 of the '683 patent, “an external sound tube 11 is provided which has an external opening 12 and an internal sound channel 13....” Hosen Decl. Ex. 9 at 5:33-36.

[REDACTED IMAGE]

Hosen Decl. Ex. 6104 (annotations added). Moreover, [REDACTED]

[REDACTED]

[REDACTED] *Id.*

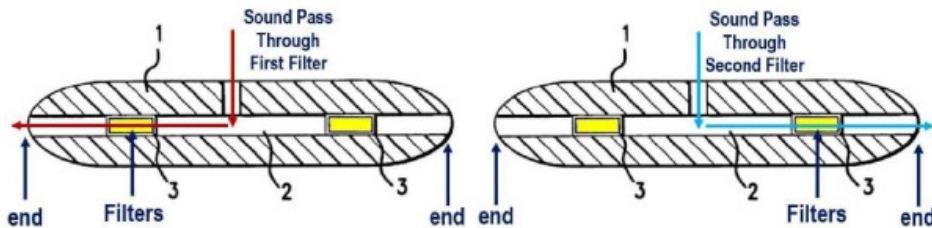
Ex. 1 at 116:3-15.

Finally, 3M argues that claim differentiation implies that “channel” does not require an opening to the outside at the center. *See* Br. at 27-28. Like 3M’s “double-ended” claim differentiation argument, this argument fails because when claim 1 of the '693 patent is read in view of the specification and prosecution history, it is clearly limited to an earplug that includes an opening at the center of the earplug to allow sound to enter and a channel extending to openings at each insertable end of the earplug. *See supra* 21-28.

2. 3M’s Assertion of the '693 Patent Against Moldex’s BattlePlug Was Objectively Baseless Because the BattlePlug Does Not Have Two Filters

Claim 1 of the '693 patent requires “a channel extending from said first and second ends to said center of said cylindrical body” with “said channel containing **a first acoustic filter and a second acoustic filter**, each of said first and second filters being in communication with one of said first and second ends.” Hosen Decl. Ex. 5014 at 4:36-41 (emphases added). Figure 2 of the '693 patent (annotated below)—the only species of invention identified by the examiner that illustrates two filters—shows an input opening

in the center, output openings at both ends, two primary sound paths from the input opening to the output openings at either end of the hearing protector, and the acoustic filters in each sound path:



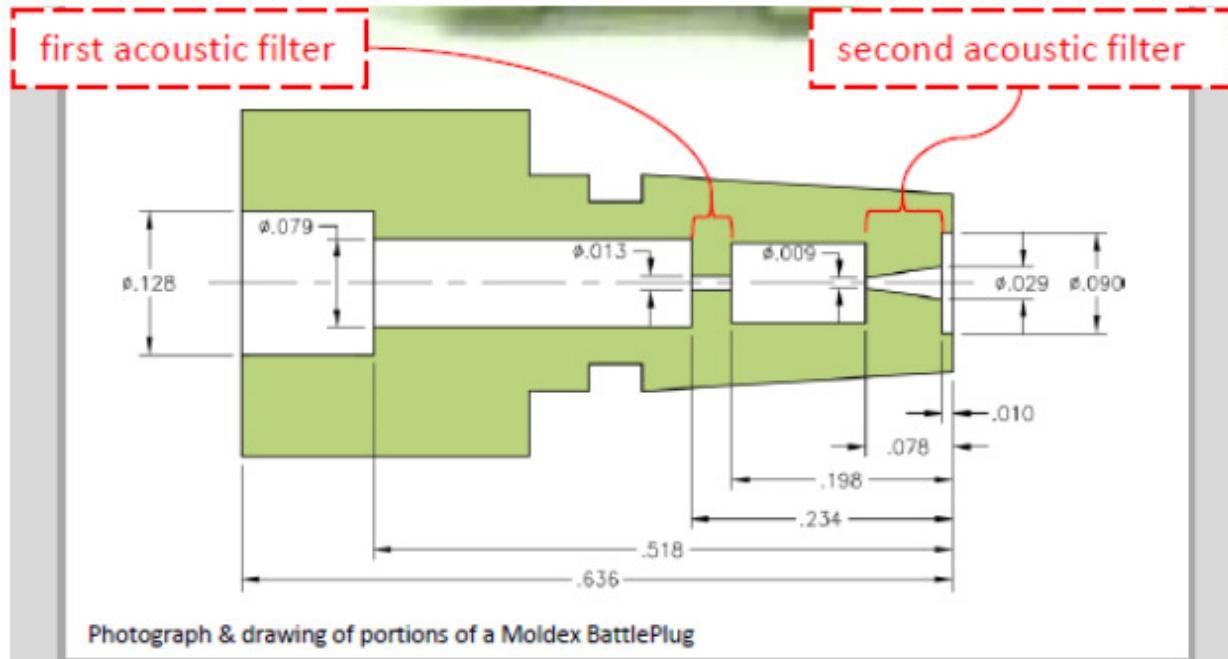
Id. As shown above, only one filter is operative at a time because it lies between the central hole that directly connects the earplug to outside sounds and the end hole that allows sound to pass through the earplug to the interior of the ear. The '693 patent further discloses that these two filters may or may not be identical. *Id.* at 3:22-23. Therefore, the existence of different possible sound paths through the different filters—which depend on the orientation of the earplug—is how the '693 patent's invention achieves different attenuation modes depending on which end is inserted into the ear.

[REDACTED]

[REDACTED]

[REDACTED] Soli Decl. ¶ 58.

The only way that the BattlePlug could have “a second acoustic filter” is if “acoustic filter” is construed to mean *any* constriction in a sound path, as 3M argued in this excerpt from its infringement contentions in the Patent Litigation:



Hosen Decl. Ex. 10 at 13. Not only is this construction inconsistent with the clear import of the specification, it is also inconsistent with the inventor's own writings. Another patent by the inventor of the '693 patent, U.S. Patent No. 6,068,079 (the "079 patent"), requires an "[a]coustic valve of a tube enclosing two rigid disks axially spaced opposite each other, each of the disks containing at least one perforation." *Id.* Ex. 6112 at Abstract. The perforated disks are a series of constrictions within a sound channel, which are described as a single acoustic valve or filter:



Id. (annotations added); Soli Decl. ¶ 66. Thus, 3M’s contention that each constriction in a single sound channel is an “acoustic filter” is contradicted by the inventor’s own use of the term, still further evidence that 3M’s infringement claim was objectively baseless.

3. The Claim Constructions Required for the BattlePlug to Infringe Would Invalidate the '693 Patent

That 3M’s claim for infringement of the '693 patent was objectively baseless and lacked probable cause is particularly clear because 3M faced a “lose-lose” situation: the claim constructions 3M needed to prevail on infringement would necessarily invalidate the asserted claims.

Claim 1 of the '693 patent requires, among other things, “a hearing protector comprising:

a cylindrical body having a center, a first end and a second end;

a channel extending from said first and second ends to said center of said cylindrical body; and

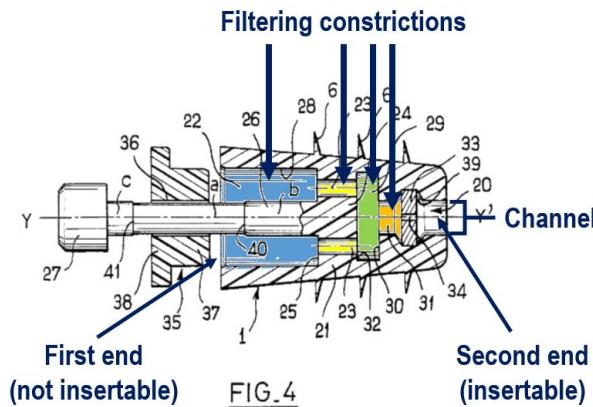
said channel containing a first acoustic filter and a second acoustic filter, each of said first and second filters being in communication with one of said first and second ends.”

Hosen Decl. Ex. 5014 at 4:30-41.

As demonstrated above, instead of “a cylindrical body having a center, a first end and a second end,” the BattlePlug has only a single end that is insertable into the auditory canal. Instead of a “channel extending from said first and second ends to said center of said cylindrical body,” the BattlePlug has no channel opening at the center of the

cylindrical body. And instead of a channel containing “a first acoustic filter and a second acoustic filter,” the BattlePlug has a single channel with multiple constrictions that serves as a single acoustic filter.

Thus, for the BattlePlug to infringe any of the '693 patent's claims, the claim would have to be read so broadly as to cover a single-ended earplug with a single sound path containing multiple constrictions and openings at either end but no center hole. 3M's own expert admitted that, under his interpretation of the '693 patent, claim 1 of the '693 patent would read on “an earplug with one insertable end” and a “second end which is not insertable,” having a “channel running from one end to the other end,” with “two filters disposed within that channel.” Hosen Decl. Ex. 1 at 164:11-165:11. Notably, this describes to a “T” FR'642, which the '693 patent itself identifies as “well known” prior art and explicitly distinguishes in the specification. *See* Soli Decl. ¶¶ 23-28, 69-72. That this technology was disclosed in FR'642 is immediately evident from its Figure 4, annotated below for clarity:



Hosen Decl. Ex. 6108. As shown in FR'642, Figure 4 represents a “flexible body 1” that “is axially transversed by a channel 20 composed of a succession of cylindrical sections of different cross section which ensures a non-linear acoustic transmission.” *Id.* at 8:14-16. “The succession of channel sections 22, 23, 29, and 31...ensures...a non-linear acoustic transmission that results in a selective attenuation of sounds based on the range of frequencies chosen to pass through the calibrated orifice 34 in laminar form.” *Id.* at 9:11-18; *see also id.* at 12:21-24 (claiming earplug with channel “composed of a plurality of channel sections (7, 8; 22, 23, 29, 31) ensuring a non-linear acoustic transmission”). Applying 3M’s constructions, Figure 4 thus discloses a single-ended earplug, with a single channel, and multiple filters—*i.e.*, constrictions—within that single channel.

In short, if the BattlePlug meets the limitations of the '693 patent, so too must FR'642, which invalidates all of the asserted claims.¹¹ *See, e.g., Upsher-Smith Labs., Inc. v. Pamlab, L.L.C*, 412 F.3d 1319, 1322 (Fed. Cir. 2005) (“A century-old axiom of patent law holds that a product ‘which would literally infringe if later in time anticipates if earlier.’”) (citing cases).

4. Moldex Has Not Waived These Arguments

Unable to provide any explanation why a litigant could reasonably expect to prevail on 3M’s '693 patent infringement claim when the accused BattlePlug could not meet three required claim limitations absent claim constructions that would also serve to

¹¹ Asserted claim 3 additionally requires that the first and second acoustic filters are not identical, and asserted claim 17 requires that the acoustic filters permit non-linear filtration of sound. These additional features were also well-known in the prior art and would not save the dependent claims. *See, e.g., Soli Decl.* ¶¶ 69-72; Hosen Decl. Ex. 6108 at 8:14-16.

invalidate the asserted claims, 3M resorts to a manufactured waiver argument. Specifically, 3M contends that the report of Moldex’s expert, Dr. Soli, “inject[ed] three new grounds for objective baselessness” into the case, namely, the “channel”, “filter”, and invalidity arguments discussed in this section. *See* Br. at 21-25. 3M’s argument lacks merit.

3M cannot dispute that it has been aware of the supposedly newly-injected arguments since at least September 2012, when Moldex detailed them in discovery responses in the Patent Litigation. *See, e.g.*, Hosen Decl. Ex. 15 at 5-7, 11-17 (non-infringement contentions asserting “channel” and “filter” arguments); *id.* Exs. 16-31 (prior art statement and invalidity contentions); *see also* Hosen Decl. Exs. 11, 32-33 (summary judgment briefing). Nor can 3M dispute that Dr. Soli’s expert opinions were timely provided. Rather, 3M simply complains that Moldex did not describe these additional, insurmountable problems with 3M’s infringement claim in its complaint or in its initial response to a premature contention interrogatory seeking “the bases for Moldex’s allegation that 3M lacked a reasonable subjective or objective basis” for the Patent Litigation. *Id.* Ex. 34 at 8-9. Neither purported failure effects a waiver.

First, the notice pleading standard does not require a complaint to provide “detailed factual allegations” for each claim. *See, e.g., Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555 (2007); *see also Baxley-DeLamar Monuments, Inc. v. Am. Cemetery Ass’n*, 843 F.2d 1154, 1156 (8th Cir. 1988). 3M cites no authority suggesting that a sham litigation or malicious prosecution plaintiff must allege every reason why a claim was objectively baseless in order to pursue those reasons at trial.

Further, contrary to 3M’s assertion, Moldex is not limited to the baselessness contentions identified in Moldex’s original response to Interrogatory No. 2 in May 2015. There, Moldex objected to “premature contention interrogatories” and reserved its right to supplement. Hosen Decl. Ex. 34 at 3. A party *may* supplement and/or correct its interrogatory responses *but does not need to* “if the additional or corrective information has [] otherwise been made known to the other parties during the discovery process or in writing.” *See, e.g., Coleman v. Keebler Co.*, 997 F. Supp. 1102, 1107 (N.D. Ind. 1998) (duty to supplement is satisfied when supplemental or corrective information is elicited at deposition); *see also Advanced Fiber Techs. Trust v. J & L Fiber Servs., Inc.*, No. 07-CV-1191 (LEK/DRH), 2010 WL 1930569, at *9-10 (N.D.N.Y. May 11, 2010) (denying motion to strike expert testimony raising allegedly “new” invalidity defenses that were not disclosed in interrogatory response where information at issue was made available through expert reports and deposition testimony). Here, the “channel,” “filter,” and invalidity arguments—proper subjects of expert testimony—were undisputedly disclosed in Dr. Soli’s expert report. Nothing more was required.

Moreover, 3M has failed to allege any prejudice, arguing only that it was unable to take fact discovery on these arguments. Br. at 24. Notably, 3M does not identify what fact discovery it was unable to take and, in fact, 3M questioned Moldex witnesses and Moldex’s outside counsel concerning the “new” allegations of which 3M complains it lacked notice. *See* Hosen Decl. Ex. 2 at 54:12-20, 56:16-57:15, 80:7-83:13; *see also id.* Ex. 3 at 288:9-24. 3M’s expert, Dr. Cunefare, also responded at length to the supposedly “new” opinions in Dr. Soli’s report; 3M even declined to take Dr. Soli’s deposition,

likely because 3M already had all the discovery it needed regarding Moldex's "new" allegations. Hosen Decl. Ex. 1 at 6:8-8:16, 21:12-21, 27:3-12, 38:24-40:6, 78:21-87:14, 94:5-99:24 & Ex. 36. 3M's frivolous "waiver" argument should be rejected.

D. There Is a Genuine Issue of Material Fact Regarding Whether 3M Knew or Recklessly Ignored that Moldex Was the Prior Inventor of the '157 Patent

Finally, disputes of material fact preclude summary judgment with respect to those portions of Moldex's claims based on 3M's objectively baseless assertion of the '157 patent against Moldex's M-Series earmuffs in the Patent Litigation.¹² Although Moldex did not contest that the claims of the '157 patent asserted by 3M in the Patent Litigation read on Moldex's M-Series earmuffs, 3M's assertion of this patent was objectively baseless because, based on facts known to 3M, this patent was invalid. *See, e.g., C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1368 (Fed. Cir. 1998) ("Conduct prohibited under antitrust law includes bringing suit to enforce a patent with knowledge that the patent is invalid[.]"). In its Motion, 3M argues that its assertion of the '157 patent against Moldex's M-Series earmuffs could not have been objectively baseless because a reasonable litigant in 3M's position would have had no reason to know that the '157 patent was invalid in light of Moldex's prior invention of the claimed technology. Br. at 34-36. The evidence, however, shows otherwise. A reasonable jury could find that 3M

¹² It is sufficient that a single cause of action is objectively baseless; appending a meritorious cause of action to an objectively baseless one does not immunize the latter from the antitrust laws or from tort liability for malicious prosecution. *See, e.g., Franklin Mint Co. v. Manatt, Phelps & Phillips, LLP*, 184 Cal. App. 4th 313, 333 (2010) (malicious prosecution); *MCI Commc'n Corp. v. Am. Tel. & Tel. Co.*, 708 F.2d 1081, 1154 (7th Cir. 1983) (sham litigation). 3M does not argue otherwise.

knew or recklessly ignored specific facts that would prevent a litigant from reasonably expecting to prevail on 3M's claim.

First, prior to filing suit against Moldex on March 8, 2012, 3M knew that Moldex had displayed its M-Series earmuffs at trade shows as early as 2001 and sold M-Series earmuffs as early as 2002. Hosen Decl. Ex. 4 at 96:14-97:4; *id.* Ex. 5 at 23:15-24, 138:5-17; *id.* Ex. 37. [REDACTED]

[REDACTED] *Id.* Ex. 5503. Before 3M filed suit against Moldex on March 8, 2012, 3M also knew that it took 3M—with its vast resources and facilities and prior earmuff design experience—[REDACTED]

[REDACTED], which 3M claims practices the '157 patent. *Id.* Ex. 5004 at -128411; Ex. 5005 at -103041. Thus, 3M knew—or was at least reckless in not knowing—that Moldex's M-Series earmuff had been in development and testing since at least 1997 for it to be at trade shows by 2001. 3M also knew, or recklessly ignored, that it was unable to “swear behind” the '157 patent's priority date of July 8, 1999 to obtain an earlier priority date. *Id.* Ex. 5006. Thus, when it filed suit, 3M knew or recklessly ignored that the '157 patent was invalid under 35 U.S.C. § 102(g) unless Moldex had somehow been able to develop, test, and bring to market its M-Series earmuffs in two years, [REDACTED]—with extensive earmuff development experience, faster prototyping, and the benefit of technological

advancements that did not exist before Moldex introduced its M-Series earmuff in 2002—to develop a similar earmuff product.¹³

3M amassed still more information confirming Moldex's prior invention of the '157 patent once it filed suit, yet continued to assert the '157 patent. For example, when 3M filed suit on March 8, 2012, Moldex confirmed that the accused M-Series earmuffs had been on the market for a decade (as 3M already knew). Hosen Decl. Ex. 1045. On September 14, 2012, Moldex served 3M with detailed invalidity contentions on the '157 patent, which referenced documents confirming that Moldex personnel—specifically Terry Grimsley—"modeled a hearing protection hood made of hard polypropylene plastic with over-molded Kraton plastic...that reflected appreciation of the invention by the Moldex inventors of all limitations of the invention on or before July 30-31, 1997." *Id.* Ex. 28. In September and November 2012, Moldex produced to 3M thousands of documents detailing the conception and development of the M-series earmuff and showing that Moldex's first reduction to practice was prior to 3M's earliest possible priority date of July 8, 1999. *Id.* at ¶ 3.

For example, the entries in Mr. Grimsley's lab journal [REDACTED]

[REDACTED] Hosen Decl. Ex. 6 at 118:6-121:18 & Ex. 223. Such evidence is highly probative because it was recorded contemporaneously. *See, e.g., TransWeb, LLC v. 3M Innovative Props. Co.*, 812 F.3d

¹³ Notably, 3M has blocked Moldex from obtaining discovery into 3M's pre-suit investigation relating to both the '157 and '693 claims by instructing its witnesses to not answer deposition questions on this issue and asserting attorney-client privilege. 3M cannot now argue that it is entitled to summary judgment on these claims because of a "lack of evidence" created by its own privilege assertions.

1295, 1302 (Fed. Cir. 2016) (“[C]ontemporaneous documentary evidence provides greater corroborative value.”).

Moldex also produced documents showing that it had reduced the inventions of '157 patent to practice months before 3M's July 1999 priority date. Moldex [REDACTED]

[REDACTED] *See, e.g.*, Hosen Decl. Exs. 1141, 1142; *see also id.* Ex. 7 at 99:25-103:11. Moldex produced invoices [REDACTED] [REDACTED], that helped make these functional prototypes. *Id.* Ex. 1140; *see also id.* Ex. 7 at 82:17-90:14, 90:25-94:4. Moldex also produced invoices [REDACTED]

[REDACTED] *Id.* Ex. 1143; *id.* Ex. 7 at 103:12-106:4.¹⁴ Despite all of this evidence confirming Moldex's prior invention, 3M continued to aggressively prosecute the '157 claim, insisting on deposing eight Moldex employees concerning the development of the M-Series earmuff in March and April of 2013. Hosen Decl. at ¶ 4. 3M's maintenance of

¹⁴ 3M attempts to argue that Moldex's prior invention defense would have failed because Moldex was not diligent in reducing the M-Series earmuff to practice, citing to questioning by 3M's counsel regarding whether [REDACTED]

[REDACTED] Br. at 38-39. But this is not the relevant inquiry under a prior invention analysis. *See, e.g., Dow Chem. Co. v. Astro-Valcour, Inc.*, 267 F.3d 1334, 1342-43 (Fed. Cir. 2001) (prior inventor did not abandon invention despite two and one-half year delay between prior inventor's first making and public disclosure of invention, where prior inventor made reasonable efforts towards commercialization of invention during that time). 3M had no evidence when it filed suit—and has no evidence now—to suggest that Moldex personnel were not diligent in reducing the M-Series Earmuff invention to practice or abandoned work on the M-Series earmuff during its development. *See, e.g.*, Hosen Decl. Ex. 7 at 108:1-24; *id.* Ex. 8 at 53:21-54:16.

a claim for infringement of a patent that—as confirmed by evidence 3M received in discovery—was plainly invalid also precludes summary judgment that 3M’s assertion of the '157 patent claim was not objectively baseless. *See, e.g., Microstrategy Inc. v. Crystal Decisions, Inc.*, 555 F. Supp. 2d 475, 479-80 (D. Del. 2008) (plaintiff “was manifestly unreasonable in neglecting to reevaluate its position and continuing to assert [patent infringement] claims” in the face of “overwhelming evidence of anticipation”); *Zamos v. Stroud*, 32 Cal. 4th 958, 965 (2004).¹⁵

Finally, a reasonable jury could also find that the circumstances surrounding 3M’s ultimate dismissal of its claim for infringement of the '157 patent just one month later—and the pretext 3M offered in its court filings for doing so—show that 3M’s assertion of the claim was objectively baseless from the beginning. In May 2013, when 3M knew Moldex was preparing to file a summary judgment motion for invalidity of the '157 patent, 3M served Moldex with a covenant not to sue on the '157 patent and asked the Court to dismiss its claim for infringement of the '157 patent with prejudice. Hosen Decl. Ex. 5124. A reasonable jury could conclude from this that 3M’s infringement claim was objectively baseless. *See Teva Pharm. USA, Inc. v. Abbott Labs.*, 580 F. Supp. 2d 345, 365 (D. Del. 2008) (jury could find defendants’ infringement allegations objectively

¹⁵ 3M also suggests that a reasonable litigant would have expected to prevail on the merits simply because Moldex did not submit expert testimony in support of its invalidity defense in the Patent Litigation. Of course, an infringement defendant’s decision not to retain an expert does not relieve a patentee of its duty to refrain from initiating or maintaining objectively baseless litigation. Although expert testimony *may* be used to corroborate prior invention testimony, it is not required. *See, e.g., Meyer Intellectual Props. Ltd. v. Bodum, Inc.*, 690 F.3d 1354, 1374 (Fed. Cir. 2012) (in determining invalidity, “where the technology involved is easily understandable, expert testimony is not required.”).

baseless where, “[a]fter extensive litigation, defendants dropped the remainder of their infringement claims a month prior to trial, and executed a covenant not to sue”); *id.* (“Having deprived the court of the opportunity to flesh out the merits of the remainder of its claims, the court declines to afford defendants the benefit of the doubt that its claims were reasonable.”). Similarly, 3M’s misrepresentation to the Court in May 2013 that it was dropping the ‘157 patent infringement claim due to Moldex’s “limited sales” of M-Series Earmuffs is further evidence that 3M’s claim was objectively baseless. █

██████████ and
██████████, nearly one year before 3M moved to dismiss its claims. Hosen Decl. Ex. 38 & Ex. 5118.

Thus, disputed factual issues over the objective baselessness of both 3M’s initiation and its continued prosecution of the ‘157 patent require denial of 3M’s Motion.

IV. CONCLUSION

Moldex respectfully requests that the Court deny 3M’s Motion in its entirety.

Date: April 22, 2016

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